

Q 1

The specific site at which substrate is attached on the enzyme and converted into product is called as ___?

A

Reaction site

B

Active site

C

Binding site

D

None of these

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Q 2

According to VBT, the essential condition for chemical bonding is that the orbitals of atoms participating in bond formation must

A

added

B

multiply

C

overlap

D

divide

1

Q 3

Butyric acid is derived from the word butyrum which means_____?

A

Milk

B

Butter

C

Cheese

D

None of these

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Q 4

When an electron remains between orbit, its momentum is

A dequantized

B quantized

C emitted

D changes always

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Q 5 The compounds which belongs to same functional group forms a_____?

A Class

B Group

C Homologous series

D None of these

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Q 6

When animals inhale air, oxygen will move into the lungs due to difference in partial pressure of oxygen in lungs and atmosphere. This obeys

A Pascal's law

B Dalton's law

C Charles's law

D Bohr's law

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Q 7

SN₁ reaction is a _____?

A

Multistep reaction

B

Two step reaction

C

Concerted reaction

D

3 step reaction

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Q 8

Bulky ketones do not react with

A

Sodium bisulphite

B

HCl

C

Grignard reagent

D

HCN

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Q 9

Number of Electron in Na^+ Ion are

A 11

B 9

C 10

D 12

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Q 10 Following is termed as hydroxyl derivative of alkanes

A carboxylic

B Aldehydes

C Phenols and ethers

D Alcohols

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Q 11

The forces present between the molecules are called as ?

A

Chemical bond

B

Intermolecular forces

C

Intra molecular forces

D

Strong forces

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Q 12

Which one is radioactive?

A

Cs

B

Fr

C

Li

D

K

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Q 13 Left handed helix in proteins secondary structure is called as ____?

A Alpha helix

B Beta helix

C Spiral

D Concentrate

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Q 14

During S_N1 mechanism, nucleophile can attack on the halogen carbon?

A

From opposite side of leaving group

B

From front of leaving group

C

From both sides

D

None of these

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Q 15

The bond formed b/w homonuclear diatomic molecule is ___ in nature

A

polar

B

non-polar

C

may be polar or nonpolar

D

ionic

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Q 16 Benzene is extra stable because of _____?

- A Cyclic structure
- B Three alternating double and single bonds
- C Delocalization of pi-electrons
- D All of these

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Q 17

The small orderly arranged crystalline parts of amorphous solids are called

A

isotrope

B

crystals

C

crystallite

D

Bakelite

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Q 18 Wholar first time prepare urea in laboratory in_____?

A 1900

B 1829

C 1850

D 1828

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Q 19 Base catalyzed reaction of carbonyl group takes place in presence of :

A Weak electrophile

B Strong nucleophile

C Weak nucleophile

D Strong electrophile

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Q 20 Evaporation is a _____ process?

A Exothermic

B Spontaneous

C Non-Spontaneous

D None of these

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Q 21 Formamint is made up of _____?

A Formaldehyde + maltose

B Formaldehyde + lactose

C Formaldehyde + Galactose

D Formaldehyde + fructose

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Q 22

Which of the following product formed when ethyl chloride react with alcoholic KOH?

A

 C_2H_4

B

 $\text{C}_2\text{H}_5\text{OH}$

C

 $\text{C}_2\text{H}_4\text{ClOH}$

D

 C_2H_6

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Q 23

In the gaseous state, the distance between the molecules is ____ times ____ than their diameters.

A

2 ,lesser

B

3 ,lesser

C

3 ,greater

D

2 ,greater

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Q 24

Decomposition of Water into Hydrogen and oxygen is a

A

Reversible Reaction

B

Endothermic Reaction

C

Exothermic Reaction

D

Oxidation Reaction

23

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Q 25

Ethene react with Oxygen in the presence of Silver oxide to produce_____?

A

Ethylene oxide

B

Ethylene epoxide

C

Methylene oxide

D

Both a and b

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Q 26

How many d-block elements are present in the periodic table?

A

40

B

23

C

37

D

30

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Q 27

Reaction intermediate

A Cannot be Separated from reaction mixture

B Contain normal bonds

C can be isolated from reaction mixture

D Both B and C

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Q 28

Boiling point of carboxylic acids are high due to?

A

Polarity of carbonyl group

B

Due to methyl group

C

Due to H-Bonding

D

Due London forces

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Q 29

Which of the following catalyst is used for the preparation of acidic anhydrides ?

A

 $\text{K}_2\text{Cr}_2\text{O}_7$

B

 P_2O_5

C

 $\text{H}^+/\text{H}_2\text{O}$

D

 H_2SO_4

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Q 30

Metals are _____?

A

Reducing agents

B

Oxidizing agents

C

Both a and b

D

Dehydrating agents

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Q 31

the tendency of of an atom to attract a shared electron pair towards itself is called

A

electron affinity

B

ionization energy

C

electronegativity

D

polarity

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Q 32

Ancient glass becomes milky due to

A refraction

B crystallization

C volatilization

D dispersion

31

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Q 33

Salt bridge are used to give

A

Highly conductive path

B

To balance amount of - and + ion in both half cells

C

Both A and B

D

to increase resistivity

32

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Q 34

If $n = 4$ it will contain sub shells

A

s

B

p

C

s,p,d

D

s,p,d,f

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Q 35

What is the common name of 2-methyl-2-chloropropane ?

A

secondary propyl chloride

B

Tertiary butyl chloride

C

Secondary butyl chloride

D

Isobutyl Chloride

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Q 36

In Industry Caustic Soda is formed by electrolysis of

A

Dilute NaCl Solution

B

Fused NaCl

C

Concentrated NaCl Solution

D

NaCl Solution

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Q 37

The oxidation number in $[\text{MnO}_4]^{-2}$

A

7

B

-7

C

6

D

-6

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Q 38

If pressure and volume of a gas are variable while temperature remains constant, this belongs to

A Charles's law

B Boyle's law

C Avogadro's law

D Pascal's law

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Q 39

The ionic radius is always _____ than the atomic radius from which it is derived

A

higher

B

larger

C

moderate

D

smaller

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Q 40

For a sub shell $l=2$ and $m = -2, -1, +1, +2$, it implies that it has _____ space orientation

A

one

B

two

C

three

D

five

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Q 41

For the reaction; $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$ the change in enthalpy is called as _____?

A

Enthalpy of formation

B

Enthalpy of neutralization

C

Enthalpy of Sublimation

D

Enthalpy of reaction

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Q 42

By increasing the concentration of substance on reactant side shifts the equilibrium to

A Backward direction

B Forward Direction

C higher concentration

D None of these

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Q 43 Non protein part which is conjugated with protein is called_____.

A Coenzyme

B Co-factor

C Prosthetic group

D None

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Q 44

Which of the following are soluble in water?

A

Small alcohols

B

Small carboxylic acids

C

Acetone

D

Butane

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Q 45

Which is sold as fertilizer

A

 CaSiO_3

B

 Na_2SiO_3

C

 $\text{Ca}_3(\text{PO}_4)_2$

D

 MnSiO_3

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Q 46

Due to the formation of protective layer of oxides at Aluminum oxide surface, it is hard to burn it

A completely in air

B completely in oxygen

C with carbon

D with nitrogen

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Q 47

in groups, the removal of electrons from valence shell is easy due to

A

addition of electrons

B

addition of shells

C

increase in nuclear charge

D

strong attractive forces

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Q 48

Fused Bauxite is electrolyzed to get

A

Sodium

B

Magnesium

C

Aluminum

D

Iron

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Q 49

Enzymes which bring about exchange of functional group is called_____.

A Oxidoreductase

B Hydrolases

C Ligases

D Transferases

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Q 50

What are Kekule structures?

A

The two isomers of benzene

B

The isomers of arenes

C

The two-resonance structure of benzene

D

The two-resonance structure of phenols

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Q 51

Sodium metal shows metallic luster is explained by

A

diffusion of Na^+

B

oscillation of loose electrons

C

excitation of free protons

D

strong crystal lattice

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Q 52

If we decrease temperature of a gas 2 times, its volume will

A

increase 4 times

B

decrease 4 times

C

decrease 2 times

D

increase 2 times

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Q 53

Downs cell is used to prepare

A

Sodium carbonate

B

Sodium bicarbonate

C

Sodium metal

D

Sodium hydroxide

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Q 54

Spectrum is the visual display or _____ of component of white light when it is passed through prism

A

rarefaction

B

radiation

C

collection

D

dispersion

53

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Q 55

The peaks forms in a mass spectrograph shows number of _____ of an element

A electrons

B isotopes

C protons

D neutrons

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Q 56

Which of the following is a carboxylic acid derivative ?

A

Alcohol

B

Acetic acid

C

Acyl halide

D

Methyl halide

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Q 57

Which of the following pigment is Blue- green in colour?

A

Chlorophyll a

B

chlorophyll b

C

chlorophyll c

D

none of these

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Q 58

Inbreeding increases the frequency of which of the following?

A

heterozygous

B

genetic diversity

C

genetic linkage

D

homozygous

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Q 59

Carapace is present in which class of arthropoda?

A

Arachnids

B

Insects

C

Crustaceans

D

All of them

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Q 60

What percentage of protein is found in the cell membrane?

A

20-4-

B

40-50

C

60-80

D

90

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Q 61

The only aquatic arthropods:

A

Crustaceans

B

Arachnids

C

Myriapods

D

Gastopods

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Q 62

In enzymatic mechanism, the substrate bind to enzyme active site to produce?

A reactants

B enzymes

C products

D all of these

61

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Q 63

Choose the organ that filters the lymph:

A heart

B liver

C spleen

D pancreas

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Q 64

Its protein in nature

A

fats /cholesterol

B

ATP

C

not known without screening test

D

Ligase

63

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Q 65

Proteins and lipids are converted into glycolipids and glycoproteins by adding carbohydrates by?

A

ribosomes

B

cytoplasm

C

golgi apparatus

D

endoplasmic reticulum

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Q 66

Which two proteins are the major components of myofibrils, allowing for muscle fiber contraction?

A

Myosin and cartilage

B

Myode and myosin

C

Lamellae and actin

D

actin and myosin

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Q 67

All of the following about reflex action are true EXCEPT:

A

It is voluntary

B

it is involuntary

C

It is found in higher animals

D

All of these

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Q 68

Which of following is not considered as basic shape of a bacterium

A

cocci

B

filamentous

C

spiral

D

bacilli

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Q 69

Protein coat of a virus enclosing nucleic acid is called?

A

Vector

B

Capsid

C

Plasmid

D

Genome

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Q 70

Mating with non-relatives is known as?

A inbreeding

B outbreeding

C breeding

D none of these

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Q 71

The pleural membranes cover which organ?

A

Kidney

B

Heart

C

Brain

D

Lungs

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Q 72

Smooth muscles, cardiac muscles and organs are regulated by which of the following?

A

Central nervous system

B

Parasympathetic nervous system

C

Sympathetic nervous system

D

Autonomic system

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Q 73

Which method is of asexual reproduction?

A sporulation

B fission

C apomixis

D all of these

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Q 74

Which two reactions occur during photophosphorylation

- A ATP is hydrolysed and NADP is reduced.
- B ATP is hydrolysed and NADPH is oxidised.
- C ATP is synthesised and NADP is reduced.
- D ATP is synthesised and NADPH is oxidised

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Q 75

Natural selection can amplify or diminish variations that are?

A

Heritable

B

non heritable

C

both a and b

D

acquired

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Q 76

Unlike eukaryotes, prokaryotes have no membrane-bound organelles. How, then, are prokaryotes able to generate energy?

A Prokaryotes generate sodium gradients across their nuclear membranes

B Prokaryotes do not generate energy

C Prokaryotes produce energy via photosynthesis

D Prokaryotes generate proton gradients across their plasma membranes

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Q 77

The lipid vesicles used for drug delivery system called

A inositides

B lipoproteins

C liposomes

D drugoles

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Q 78

If more substrate to an already occurring enzymatic reaction is added more enzyme activity is seen because?

- A There is probably more substrate present than there is enzyme
- B There is probably more product present than either substrate or enzyme
- C The enzyme substrate complex is probably failing to form during the reaction
- D There is probably more enzyme available than there is substrate

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Q 79

The union of meiotically produced specialized sex cells from each parents produce?

A fertilized egg

B unfertilized egg

C zygote

D none of these

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Q 80

Which of the statements correctly describes why ions are unable to cross the plasma membrane without channel proteins?

- A They are unable to cross the hydrophilic phosphate heads of the lipid bilayer.
- B They are unable to cross the hydrophobic tails of the lipid bilayer.
- C They are unable to cross both the phosphate heads and fatty acid chains of the lipid bilayer.
- D They are too big to cross the plasma membrane.

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Q 81

The number of efferent lymph vessels in a lymphatic system is:

A

1

B

2

C

3

D

Numerous

80

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Q 82

The brain is mainly divided into --- parts.

A

2

B

3

C

4

D

5

81

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Q 83

The contractile protein of skeletal muscle involving ATPase activity is:

A

actin

B

myosin

C

troponin

D

tropomyosin

82

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Q 84

What was the unit membrane model?

A

Plasma membrane has lipid bilayer.

B

Proteins are embedded in the lipid bilayer.

C

Plasma membrane has charged pores for transport of materials which cannot penetrate through the lipid bilayer.

D

All of the above.

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Q 85

Chromatin body in prokaryotes can also termed as

A nuclear body

B nuclear region

C nucleoid

D all of Above

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Q 86

The spinal cord is the continuation of which of the following?

A cerebellum

B pons

C medulla oblongata

D brain stem

85

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Q 87

Calvin cycle is

A

inhibited by light

B

dependent upon light

C

independent on light

D

supported by light

86

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Q 88

What is the approximate diameter of retroviruses?

A

150 nm

B

100 nm

C

200 nm

D

250 nm

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Q 89

Which of the following are assembled and disassembled during the cell cycle?

A microtubules

B microfilaments

C all of these

D none of these

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Q 90

Which of the following would not be found in a prokaryotic cell?

A mitochondria

B RNA

C Ribosomes

D plasma membrane

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Q 91

Hemoglobin molecule exhibits which structural organization of proteins?

A primary structure

B secondary structure

C tertiary structure

D quaternary structure

90

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Q 92

All viruses are generally resistant to which of the following antibiotics?

A Penicillin

B Streptomycin

C both a and b

D none

91

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Q 93

The example of coordinators in chemical coordination is?

A endocrine glands

B spinal cord

C brain

D human eyes

92

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Q 94

A substance which binds at the active site of the enzyme but does not result in the formation of the products is called?

- A Irreversible inhibitor
- B Reversible inhibitor
- C Non-competitive inhibitor
- D Competitive inhibitor

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Q 95

The homologous organs show similarity in

A

shape

B

origin

C

function

D

size

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Q 96

A placenta is established between the uterine and ---

A foetal tissues

B Bone tissues

C Lymph tissues

D Cardiac muscle tissue

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Q 97

Which structure of protein gives information about the folding of a protein?

A

primary structure

B

secondary structure

C

tertiary structure

D

quaternary structure

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Q 98

Germ cells in the ovary produce many?

A spermatogonia

B oogonia

C zygo spores

D eggs

97

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Q 99

The cell organelles involved, in some cases, with extra-cellular digestion _____ .

A Golgi complex

B Lysosomes

C Peroxisomes

D Glyoxysomes

98

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Q 100

How does pyruvate enter the krebs cycle after glycolysis?

A pyruvic acid

B acetyl coA

C carbon dioxide

D both a and b

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Q 101

The cluster of pouches opened from alveolar ducts is known as

A

bronchi

B

bronchioles

C

pharynx duct

D

alveoli

100

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Q 102

Genes that affect growth rate in humans influencing both weight and height are?

A Codominant

B Epistasis

C Polygene

D Pleiotropy

101

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Q 103

What is the pH of fresh HCl?

A 1.5

B 5-7

C 2-3

D 4-5

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Q 104

The difference in photosynthesis spectrum and actin spectrum occurs due to?

A Carbon dioxide

B oxygen

C carotenoids

D wavelength

103

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Q 105

In humans gill pouches have evolved into which of the following organs?

A

nose

B

ear

C

pharynx

D

eustachian tubes

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Q 106

The movement of minerals or water via extracellular pathway is known as:

A Symplast

B Apoplast

C vascular

D None of these

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Q 107

Which of these is common is both lymph vessels and veins?

- A Both have small bore
- B both have valves
- C both have low blood pressure
- D both are communicated

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Q 108

Primordial soup is a set of hypothetical conditions on ancient earth first proposed by?

A Dmitri Ivanovsky

B Dmitry Anuchin

C Nikolay Shatsky

D Alexander Oparin

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Q 109

According to the law of independent assortment, what is the possible number of combinations that chromosomes can assort to independently in the gamete?

A 16,777,216

B 2,048

C 4,194,304

D 8,388,608

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Q 110

The only promoter of leaf senescence in the following plant hormones is?

A gibberellins

B cytokinins

C auxins

D abscisic acid

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Q 111

Which of the following is most responsible for bacterial cell motility?

A

cilia

B

flagella

C

pili

D

Pseudopodia

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Q 112

What types of viruses contain the enzyme lysozyme to aid in their infection?

A bacteriophage

B animal viruses

C plant viruses

D fungal viruses

111

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Q 113

What is reduced in photosynthesis?

A

oxygen

B

carbon dioxide

C

water

D

light

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Q 114

Which of the following is NOT a characteristic feature of tapeworm?

A

Each body segment has two sets of male and female reproductive organs.

B

The digestive tract develops from endodermal cells in the embryo.

C

The body can be cut into two parts, which are mirror images of each other, in one plane only.

D

None of the above.

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Q 115

Bacteriophages have been used widely in genetic research, since they are the smallest and simplest biological entities capable of?

A self replication in host cell

B duplication

C self duplication

D multiplication in host cell

114

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Q 116

Which of the following terms is best defined as a mature, motile, and haploid sperm cell produced during spermatogenesis?

- A Spermatid
- B Spermatogonium
- C Secondary spermatocyte
- D Spermatozoa

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Q 117

Which of these is correct about thoracic duct?

- A it arises in the vessels of the brain
- B it drains the entire body above the diaphragm
- C it empties its contents into the subclavian vein
- D it carries blood into the lymphatic system

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Q 118

The epididymis, vas deferens, and urethra are a series of ducts found in which body system?

A Endocrine

B Lymphatic

C Digestive

D Male reproductive

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Q 119

Which of the following would most greatly increase the activity of an enzyme functioning in the small intestine?

- A Decrease the temperature
- B Increase the amount of enzymes
- C Decrease the pH
- D Increase the amount of substrate

118

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Q 120

Central nervous system is present in:

- A Asymmetrical animals
- B Bilaterally symmetrical animals
- C Radially symmetrical animals
- D B and C both are correct

119

SKIPPED QUESTIONS 

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Q 121 Periplaneta belongs to which phylum?

A Mollusca

B Annelida

C Echinodermata

D Arthropoda

120

SKIPPED QUESTIONS 

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Next Question 

Q 122

From one pyruvate passing through Krebs cycle, how many NADH are formed?

A

1

B

2

C

3

D

4

121

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 123

What is the medical terminology for the pain in joints?

A Chondritis

B Arthralgia

C synovitis

D Rheumatism

122

SKIPPED QUESTIONS 

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Next Question 

Q 124

What is the property of the part of a cell membrane which is in contact with external and internal environment?

A hydrophobic

B hydrophilic

C neutral

D both a and b

123

SKIPPED QUESTIONS 

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Next Question 

Q 125

In a travelling wave, five complete waves pass through a point in 10 seconds. Frequency of the wave is:.....

A 0.5 Hz

B 5 Hz

C 50 Hz

D 15 Hz

124

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 126

Half life of radioactive element means

A full life decay

B quarter life decay

C half of decay

D all of these

125

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 127

The root mean square value of the alternating current is equal to

- A twice the peak value
- B half the peak value
- C equal to the peak value
- D $(1/\sqrt{2})$ times the peak value

126

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 128

The fractional change in resistance per kelvin is known as

- A coefficient in resistance
- B temperature coefficient of resistance
- C resistance
- D None of these

127

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Q 129

For an object moving in a circle, the angle between linear velocity and the position vector is:

A 0 degrees

B 30 degrees

C 90 degrees

D 60 degrees

128

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Q 130

Effect of work is equal to

A

Change in total energy

B

change in kinetic energy

C

change in power

D

none of these

129

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 131

Which rays has highest mass

A alpha rays

B beta rays

C gamma rays

D none of these

130

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 132

Consider a capacitor has vacuum in the space between the conductors. If we double the amount of charge on each conductor, what happens to the capacitance?

A

it increases

B

it decreases

C

it remains same

D

it depends on the size or shape of the conductors

131

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 133

In a stationary wave, the distance between adjacent antinodes is equal to:

A λ

B 2λ

C $\lambda/2$

D $\lambda/4$

132

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Q 134 The momentum of white light is ____ than x rays

A less

B high

C equal

D none of these

133

SKIPPED QUESTIONS 

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Next Question 

Q 135

When a charge particle enters in the magnetic field perpendicular to the velocity of charge, followed path is

- A circular
- B parabolic
- C elliptical
- D hyperbolic

134

SKIPPED QUESTIONS 

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Q 136

If a transverse wave travelling in a rarer medium is incident on a denser medium, it is reflected such that...

A it undergoes a phase change of 90 deg

B it undergoes a phase change of 180 deg

C it undergoes a phase change of 270 deg

D it undergoes a phase change of 0 deg

135

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 137

If 1 ampere current will flow in 5m conductor for 1 hour the charge flow will be

A 5C

B 18000C

C 1C

D 3600C

136

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 138

If the velocity varies linearly with time then acceleration is called

A

nonuniform

B

discrete

C

instantaneous

D

uniform

137

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 139

The frequency of a particle performing circular motion changes from 60 rpm to 180 rpm in 20s, then the angular acceleration is

A $0.1\pi \text{ rad/s}^2$

B $0.2\pi \text{ rad/s}^2$

C $0.3\pi \text{ rad/s}^2$

D $0.4\pi \text{ rad/s}^2$

138

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 140

The output voltage of a rectifier is

A

smooth

B

pulsating

C

perfectly direct

D

alternating

139

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 141

Maximum power is delivered when internal resistance of the source equals

A zero resistance

B load resistance

C max resistance

D None of these

140

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 142

The direction of induced current is always so as to oppose the change which causes the current is

A Faraday's Law

B Lenz's Law

C Ohm's Law

D Kirchoff's Law

141

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 143

The radiation reached on earth by sun is

A

alpha

B

beta

C

gamma

D

all of these

142

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 144

Which one of the following is not the unit of heat?

A Calorie

B Joule

C Watt.sec

D Watt

143

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 145

A travelling transverse wave has amplitude a and wavelength λ . What is the minimum distance between a crest and a trough in the direction of propagation of wave.

A $2a$ B $a/2$ C 2λ D $\lambda/2$

144

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 146

If two photons interact in same direction what will change

A

mass

B

energy

C

intensity

D

none of these

145

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 147

Coulomb's law is only applicable for

A big charges

B small charges

C point charges

D any charges

146

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 148

The four bulbs of 40 W each are connected in series with a battery across them. Which of the following statement is true?

- A The current through each bulb is same
- B The voltage across each bulb is not same
- C The power dissipation in each bulb is not same
- D None of the above

147

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 149

A car travels 30 m toward east, then it takes turn and travels 40 m towards north. It takes 50 seconds. Its average velocity is:....

A $7/5 \text{ m/s}$ B 1 m/s C $1/5 \text{ m/s}$ D 5 m/s

148

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Q 150

A bullet of mass 5×10^{-5} has the velocity of 200 m/s, kinetic energy of the bullet is

A

100 J

B

1000 J

C

10 J

D

none of these

149

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 151

The electric field inside a spherical shell of uniform surface charge density is

A

Zero

B

Infinite

C

Constant less than zero

D

Directly proportional to distance

150

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 152

A particle of mass ' m ' is projected from the ground with an initial speed u_0 at an angle ' a ' with the horizontal. At the highest point of its trajectory it makes a completely inelastic collision with another particle of mass which was thrown vertically upward from the ground with the same initial speed u_0 . The angle that the composite system makes with the horizontal immediately after the collision is

A

 37°

B

 $45^\circ - a$

C

 $45^\circ + a$

D

 90°

151

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 153

Average life in terms of decay constant is

A

$1/\lambda$

B

λ^2

C

2λ

D

$\ln 2/\lambda$

152

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Q 154

Transistors can be used as

A

half wave rectifier

B

full wave rectifier

C

both

D

none of these

153

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 155

Woolen clothes keep the body warm because of

A bad conductivity

B good conductivity

C low temperature

D none of these

154

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 156

Maximum efficiency of half wave rectifier is

A

80.6 %

B

40.60%

C

70%

D

50%

155

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 157

The black body which is close to perfect body is :

A Translucent glass box

B Cavity Radiator

C Black holes

D All of these

156

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Q 158

A monatomic gas is supplied the heat Q very slowly keeping pressure constant. The work done by the gas is

A $\frac{2}{3}Q$ B $\frac{1}{3}Q$ C $Q/2$ D $2Q/5$

157

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 159

In simple harmonic motion, which two quantities are always in opposite direction?

A kinetic energy and potential energy

B kinetic energy and velocity

C velocity and acceleration

D acceleration and displacement

158

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Q 160

In a stationary waves, if the string is made to vibrate in n loops, the frequency of stationary waves set up on the string will be:

A $f_n = n \cdot f_1$

B $f_n = n + f_1$

C $f_n = f_1 / n$

D $n \cdot f_n = f_1$

159

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 161

Two identical gases expand i) isothermally ii) adiabatically. Work done is more in

A Isothermal process

B Adiabatic process

C Neither of them

D equal in both cases

160

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 162

The existence of positron was discovered in the

A

thermal radiation

B

cosmic radiation

C

electromagnetic radiation

D

non-electromagnetic radiation

161

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 163

T_1 and T_2 are the half lives of two radioactive elements of decay constant λ_1 and λ_2 respectively then the value of T_1/T_2 is.....

A $\lambda_2 = \lambda_1$

B $\lambda_1 \lambda_2$

C λ_1 / λ_2

D λ_2 / λ_1

162

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 164

The magnetic field is parallel to a surface, then the magnetic flux through the surface is :

A

zero

B

small but not zero

C

infinite

D

larger than 1

163

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 165

The sum of absorption and transmission of light in a medium is equal to

A incident light

B reflected light

C any of a or b

D none of these

164

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 166

 $1/R_{eq} = 1/R_1 + 1/R_2 + 1/R_3 + \dots + 1/R_n$ is the combination in

A

Series

B

Parallel

C

Both of them

D

None of them

165

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 167

The direction of linear velocity of a body moving in a circle is?

A Along radius away from center

B Along radius towards center

C changing with motion

D Along the tangent

166

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 168

Find the electric field when the velocity of the field is 12m/s and the flux density is 8.75 units.

A 510

B 105

C 150

D 165

167

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 169

4000 Coulomb charges were passing from the wire for about 12 seconds. Estimate the current during this process?

A 333.3 ampere

B 333.33 volts

C 666.67 ampere

D None of them

168

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 170

When momentum of body increased by 200 %, its kinetic energy increases by

A 200 %

B 300 %

C 400 %

D 800 %

169

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Q 171

For a half-wave rectifier having diode voltage V_D and supply input of V , the diode conducts for $\pi - 2\theta$, where θ is given by

A $\tan^{-1}(V_D/V)$

B $\sin^{-1}(V_D/V)$

C $\cos^{-1}(V_D/V)$

D $\cot^{-1}(V_D/V)$

170

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 172

Pseudo forces arises in

A

inertial frames

B

constant moving frames

C

rest frame of reference

D

accelerating frame of reference

171

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 173

In annihilation process particles move in

A

same direction

B

opposite direction

C

perpendicular direction

D

none of these

172

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 174 Steady current does not change with respect to _____.

A conductor

B source

C time

D potential difference

173

SKIPPED QUESTIONS 

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Next Question 

Q 175

If an A.C voltage rms value of 10 volt is applied as input of half wave rectifier, then the rms voltage value of D.C output will be

A 10V

B 10.3V

C 10.7V

D 9.3V

174

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 176

Is it possible to visualize magnetic flux lines

A yes directly we can see with eyes

B we need microscope

C we need telescope

D All cases are not possible

175

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Q 177

X rays are also known as

A slow moving invisible photons

B slow moving visible photons

C fast moving invisible photons

D fast moving visible photons

176

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 178

100 W heater is used to heat 500 g of water from 20°C to 50°C. How long should the heater be switched on? Specific heat capacity of water is 4.2 J/g°C.

A 63 sec

B 63 min

C 630 sec

D 6.3 min

177

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 179

A pendulum undergoes simple harmonic motion. The phase difference between the displacement and the acceleration of the particle is:

A 0

B $\pi/2$ C π D $3\pi/2$

178

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Q 180

The isotope of $^{235}_{92}\text{U}$ has _____ number of neutrons

A

141

B

142

C

143

D

144

179

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Comprehend key vocabulary

Q 181

overcast

A

rainy

B

cloudy

C

windy

D

clear

180

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 182

Choose the correct sentence.

A

i think june is the hottest month.

B

I think june is the hottest month.

C

I think June is the hottest month.

D

I think June is the hottest month.

181

SKIPPED QUESTIONS ⤴

⬅ Previous Question

Next Question ➡

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 183

Choose the correct spelling of the word

A

arround

B

arond

C

arund

D

around

SKIPPED QUESTIONS



182

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Next Question >

Demonstrate control of tenses and sentence structure

Q 184

He _____ a mill in this town.

A

have

B

has

C

is having

D

was having

183

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 185

What is the tense of this question? What will you do when this course finishes?

A

Present

B

past

C

future

D

none of these

184

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 186

Which verb is NOT in the present tense?

A

She listened

B

She talks

C

She waits

D

She eats

185

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate correct use of subject-verb agreement

Q 187

Sameer _____ in the park every day.

A

run

B

runs

C

running

D

walk

186

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 188

Mrs Rose planning to do a course in Biology next week.

A are planning

B plans

C with a plan

D planning

187

SKIPPED QUESTIONS ⤴

⬅ Previous Question

Next Question ➡

Comprehend key vocabulary

Q 189 Should I wear my joggers or my _____?

A cardigan

B shorts

C scarves

D trainers

SKIPPED QUESTIONS 

188

 Previous Question

Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 190

Choose the correct sentence.

A

Wow, what a wonderful event.

B

Wow! What a wonderful event?

C

Wow! What a wonderful event!

D

Wow! what a wonderful event.

189

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 191

Choose the correct sentence.

A

Ariel is trying hard in school this semester, her father said.

B

Ariel is trying hard in school this semester,' her father said.

C

Ariel is trying hard in school this semester?' her father said.

D

Ariel is trying hard in School this semester,' her father said.

190

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Comprehend key vocabulary

Q 192

Sana became _____ at typing because she practiced every day for six months.

A

reflective

B

redundant

C

proficient

D

dormant

191

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate correct use of articles and prepositions

Q 193

Most people agree that kindergarten contributes _____ the child's mental development.

A on

B to

C among

D of

192

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of subject-verb agreement

Q 194

To an outsider, the economics of this country _____ to be in disarray.

A

seem

B

seems

C

seemed

D

seeming

193

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 195

We _____ a week in Italy each year.

A

spend

B

spending

C

spends

D

are spending

194

SKIPPED QUESTIONS  Previous QuestionNext Question 

Comprehend key vocabulary

Q 196

The umpire and the two teams walked out onto the _____.

A

circus

B

course

C

observatory

D

pitch

195

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 197

Choose the correct tense?

A

I went to school yesterday.

B

I go to school yesterday

C

I have gone to school yesterday

D

I come to school yesterday.

196

SKIPPED QUESTIONS  Previous QuestionNext Question 

Demonstrate correct use of articles and prepositions

Q 198

The book is about _____ man who lives on _____ small island.

A a... an

B a...a

C a....the

D an....an

197

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 199

You can get (A)/ all the information (B) you want (C) from this book. (D)

A

You can get

B

all the information

C

you want

D

from this book.

198

SKIPPED QUESTIONS ⤴

⬅ Previous Question

Next Question ➡

Demonstrate correct use of subject-verb agreement

Q 200

Everything ____ fine when it's done correctly.

A

work

B

worked

C

will work

D

works

199

SKIPPED QUESTIONS 

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Next Question 

Statements and Actions

Q 201

Statement A very large number of students have failed in the final high school examination due to faulty questions in one of the subjects. I. All the students who have failed in the subject should be allowed to take supplementary examination. II. All those who are responsible for the error should be suspended and an enquiry should be initiated to find out the facts.

A Both of them follow

B Only I follow

C Only II follow

D None of them follow

200

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Complete the series

Q 202

Which letter lies in the middle of word Quality?

A

L

B

A

C

U

D

Y

201

SKIPPED QUESTIONS 

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Next Question >

Statements and conclusions

Q 203

Statements : All fish are tortoise. No tortoise is a crocodile. Conclusions : I. No crocodile is a fish. II. No fish is a crocodile.

A Only conclusion II follows

B Either I or II follows

C Neither I nor II follows

D Both I and II follow

202

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Statements and Actions

Q 204

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

203

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Fact Checking

Q 205

Fact 1: Some pens don't write Fact 2: Only blue pens write Fact 3: some writing utensils are pens If the above three statements are facts than which of the following statement will also be a fact I. Some writing utensils don't write II. Some writing utensils are blue III. Some blue writing utensils don't write

A

Only III

B

Only I and II

C

Only I

D

Only III and II

204

SKIPPED QUESTIONS 

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Next Question >

Making Judgements

Q 206

A thermometer is to temperature as a compass is to

A Pressure

B Humidity

C Direction

D Needle

SKIPPED QUESTIONS 

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Next Question >

Complete the series

Q 207

Complete the series A2.5, B5, C7.5, _____?

A D9

B D10

C D9.5

D D45

206

SKIPPED QUESTIONS  Previous QuestionNext Question 

Number series

Q 208

Look at this series 5.2, 4.8, 4.4, 4. What number should come next

A

3

B

3.3

C

3.5

D

3.6

207

SKIPPED QUESTIONS 

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Next Question >

Dependent Causes/ Independent Causes/

Q 209

I. There has been a decline in the prices of the personal computers. II. School going kids are expressing interests in learning how the computer operates.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect.
- C Both statements I and II are independent causes
- D Both statements I and II are the effects of independent cause.

208

SKIPPED QUESTIONS 

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Next Question >

Verbal Reasoning

Q 210

Language with the most alphabets is _____

A

French

B

Chinese

C

Portuguese

D

Urdu

209

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Submit

Q1

All of the following about reflex action are true EXCEPT:

A

It is voluntary

B

it is involuntary

C

It is found in higher animals

D

All of these

[< Previous Question](#)[Next Question >](#)

Q2

According to VBT, the essential condition for chemical bonding is that the orbitals of atoms participating in bond formation must

A

added

B

multiply

C

overlap

D

divide

< Previous Question

Next Question >

Q3 Which of these is correct about thoracic duct?

- A it arises in the vessels of the brain
- B it drains the entire body above the diaphragm
- C it empties its contents into the subclavian vein
- D it carries blood into the lymphatic system

< Previous Question

Next Question >

Q4 Butyric acid is derived from the word butyrum which means_____?

A Milk

B Butter

C Cheese

D None of these

< Previous Question

Next Question >

Q5

When an electron remains between orbit, its momentum is

A

dequantized

B

quantized

C

emitted

D

changes always

[< Previous Question](#)[Next Question >](#)

Q6 The compounds which belongs to same functional group forms a_____?

A Class

B Group

C Homologous series

D None of these

< Previous Question

Next Question >

Q7

When animals inhale air, oxygen will move into the lungs due to difference in partial pressure of oxygen in lungs and atmosphere. This obeys

A

Pascal's law

B

Dalton's law

C

Charles's law

D

Bohr's law

< Previous Question

Next Question >

Q8 SN1 reaction is a _____?

A Multistep reaction

B Two step reaction

C Concerted reaction

D 3 step reaction

< Previous Question

Next Question >

Q9

Bulky ketones do not react with

A

Sodium bisulphite

B

HCl

C

Grignard reagent

D

HCN

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Next Question >

Q10

Number of Electron in Na^+ Ion are

A

11

B

9

C

10

D

12

< Previous Question

Next Question >

Q11 The forces present between the molecules are called as ?

A Chemical bond

B Intermolecular forces

C Intra molecular forces

D Strong forces

< Previous Question

Next Question >

Q12

Which one is radioactive?

A

Cs

B

Fr

C

Li

D

K

< Previous Question

Next Question >

Q13 Left handed helix in proteins secondary structure is called as ____?

A Alpha helix

B Beta helix

C Spiral

D Concentrate

< Previous Question

Next Question >

Q14 During S_N1 mechanism, nucleophile can attack on the halogen carbon?

A From opposite side of leaving group

B From front of leaving group

C From both sides

D None of these

< Previous Question

Next Question >

Q15

The bond formed b/w homonuclear diatomic molecule is ___ in nature

A

polar

B

non-polar

C

may be polar or nonpolar

D

ionic

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Q16 Benzene is extra stable because of _____?

- A Cyclic structure
- B Three alternating double and single bonds
- C Delocalization of pi-electrons
- D All of these

< Previous Question

Next Question >

Q17

The small orderly arranged crystalline parts of amorphous solids are called

A

isotrope

B

crystals

C

crystallite

D

Bakelite

[< Previous Question](#)[Next Question >](#)

Q18 Base catalyzed reaction of carbonyl group takes place in presence of :

A Weak electrophile

B Strong nucleophile

C Weak nucleophile

D Strong electrophile

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Q19 Evaporation is a _____ process?

A Exothermic

B Spontaneous

C Non-Spontaneous

D None of these

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Q20 Formamint is made up of _____?

A Formaldehyde + maltose

B Formaldehyde + lactose

C Formaldehyde + Galactose

D Formaldehyde + fructose

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Q21

Which of the following product formed when ethyl chloride react with alcoholic KOH?

A

 C_2H_4

B

 $\text{C}_2\text{H}_5\text{OH}$

C

 $\text{C}_2\text{H}_4\text{ClOH}$

D

 C_2H_6

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Q22

In the gaseous state, the distance between the molecules is ____ times ____ than their diameters.

A

2 ,lesser

B

3 ,lesser

C

3 ,greater

D

2 ,greater

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Q23

Decomposition of Water into Hydrogen and oxygen is a

A

Reversible Reaction

B

Endothermic Reaction

C

Exothermic Reaction

D

Oxidation Reaction

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Q24

Ethene react with Oxygen in the presence of Silver oxide to produce_____?

A

Ethylene oxide

B

Ethylene epoxide

C

Methylene oxide

D

Both a and b

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Q25

How many d-block elements are present in the periodic table?

A

40

B

23

C

37

D

30

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Q26

Boiling point of carboxylic acids are high due to?

A

Polarity of carbonyl group

B

Due to methyl group

C

Due to H-Bonding

D

Due London forces

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Q27

Which of the following catalyst is used for the preparation of acidic anhydrides ?

A

 $\text{K}_2\text{Cr}_2\text{O}_7$

B

 P_2O_5

C

 $\text{H}^+/\text{H}_2\text{O}$

D

 H_2SO_4

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Q28

Metals are _____?

A

Reducing agents

B

Oxidizing agents

C

Both a and b

D

Dehydrating agents

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Q29

the tendency of of an atom to attract a shared electron pair towards itself is called

A

electron affinity

B

ionization energy

C

electronegativity

D

polarity

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Q30

Ancient glass becomes milky due to

A

refraction

B

crystallization

C

volatilization

D

dispersion

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Q31

Salt bridge are used to give

A

Highly conductive path

B

To balance amount of - and + ion in both half cells

C

Both A and B

D

to increase resistivity

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Q32

If $n = 4$ it will contain sub shells

A

s

B

p

C

s,p,d

D

s,p,d,f

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Q33

In Industry Caustic Soda is formed by electrolysis of

A

Dilute NaCl Solution

B

Fused NaCl

C

Concentrated NaCl Solution

D

NaCl Solution

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Q34

The oxidation number in $[\text{MnO}_4]^{-2}$

A

7

B

-7

C

6

D

-6

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Q35

If pressure and volume of a gas are variable while temperature remains constant, this belongs to

A

Charles's law

B

Boyle's law

C

Avogadro's law

D

Pascal's law

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Q36

The ionic radius is always _____ than the atomic radius from which it is derived

A

higher

B

larger

C

moderate

D

smaller

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Q37

For a sub shell $l=2$ and $m = -2, -1, 0, +1, +2$, it implies that it has _____ space orientation

A

one

B

two

C

three

D

five

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Q38

For the reaction; $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$ the change in enthalpy is called as _____?

A

Enthalpy of formation

B

Enthalpy of neutralization

C

Enthalpy of Sublimation

D

Enthalpy of reaction

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Q39

By increasing the concentration of substance on reactant side shifts the equilibrium to

A

Backward direction

B

Forward Direction

C

higher concentration

D

None of these

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Q40 Which of the following are soluble in water?

A Small alcohols

B Small carboxylic acids

C Acetone

D Butane

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Q41

Which is sold as fertilizer

A

 CaSiO_3

B

 Na_2SiO_3

C

 $\text{Ca}_3(\text{PO}_4)_2$

D

 MnSiO_3

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Q42

Due to the formation of protective layer of oxides at Aluminum oxide surface, it is hard to burn it

A

completely in air

B

completely in oxygen

C

with carbon

D

with nitrogen

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Q43

in groups, the removal of electrons from valence shell is easy due to

A

addition of electrons

B

addition of shells

C

increase in nuclear charge

D

strong attractive forces

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Q44

Fused Bauxite is electrolyzed to get

A

Sodium

B

Magnesium

C

Aluminum

D

Iron

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Q45

Enzymes which bring about exchange of functional group is called_____.

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

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Q46

What are Kekule structures?

A

The two isomers of benzene

B

The isomers of arenes

C

The two-resonance structure of benzene

D

The two-resonance structure of phenols

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Q47 Sodium metal shows metallic luster is explained by

A diffusion of Na^+

B oscillation of loose electrons

C excitation of free protons

D strong crystal lattice

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Q48

Downs cell is used to prepare

A

Sodium carbonate

B

Sodium bicarbonate

C

Sodium metal

D

Sodium hydroxide

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Q49 Spectrum is the visual display or _____ of component of white light when it is passed through prism

A rarefaction

B radiation

C collection

D dispersion

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Q50

The peaks forms in a mass spectrograph shows number of _____ of an element

A

electrons

B

isotopes

C

protons

D

neutrons

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Q51 Which of the following is a carboxylic acid derivative ?

A Alcohol

B Acetic acid

C Acyl halide

D Methyl halide

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Q52

Which of the following pigment is Blue- green in colour?

A

Chlorophyll a

B

chlorophyll b

C

chlorophyll c

D

none of these

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Q53 Inbreeding increases the frequency of which of the following?

A heterozygous

B genetic diversity

C genetic linkage

D homozygous

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Q54

Carapace is present in which class of arthropoda?

A

Arachnids

B

Insects

C

Crustaceans

D

All of them

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Q55

The only aquatic arthropods:

A

Crustaceans

B

Arachnids

C

Myriapods

D

Gastopods

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Q56

In enzymatic mechanism, the substrate bind to enzyme active site to produce?

A

reactants

B

enzymes

C

products

D

all of these

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Q57

Choose the organ that filters the lymph:

A

heart

B

liver

C

spleen

D

pancreas

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Q58

Its protein in nature

A

fats /cholesterol

B

ATP

C

not known without screening test

D

Ligase

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Q59

Proteins and lipids are converted into glycolipids and glycoproteins by adding carbohydrates by?

A

ribosomes

B

cytoplasm

C

golgi apparatus

D

endoplasmic reticulum

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Q60

Which two proteins are the major components of myofibrils, allowing for muscle fiber contraction?

A

Myosin and cartilage

B

Myode and myosin

C

Lamellae and actin

D

actin and myosin

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Q61 Which of following is not considered as basic shape of a bacterium

A cocci

B filamentous

C spiral

D bacilli

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Q62

Protein coat of a virus enclosing nucleic acid is called?

A

Vector

B

Capsid

C

Plasmid

D

Genome

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Q63

Mating with non-relatives is known as?

A

inbreeding

B

outbreeding

C

breeding

D

none of these

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Q64 The pleural membranes cover which organ?

A Kidney

B Heart

C Brain

D Lungs

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Q65

Smooth muscles, cardiac muscles and organs are regulated by which of the following?

A

Central nervous system

B

Parasympathetic nervous system

C

Sympathetic nervous system

D

Autonomic system

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Q66

Which method is of asexual reproduction?

A

sporulation

B

fission

C

apomixis

D

all of these

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Q67

Which two reactions occur during photophosphorylation

A

ATP is hydrolysed and NADP is reduced.

B

ATP is hydrolysed and NADPH is oxidised.

C

ATP is synthesised and NADP is reduced.

D

ATP is synthesised and NADPH is oxidised

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Q68

Unlike eukaryotes, prokaryotes have no membrane-bound organelles. How, then, are prokaryotes able to generate energy?

A

Prokaryotes generate sodium gradients across their nuclear membranes

B

Prokaryotes do not generate energy

C

Prokaryotes produce energy via photosynthesis

D

Prokaryotes generate proton gradients across their plasma membranes

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Q69

The lipid vesicles used for drug delivery system called

A

inositides

B

lipoproteins

C

liposomes

D

drugoles

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Q70

If more substrate to an already occurring enzymatic reaction is added more enzyme activity is seen because?

A

There is probably more substrate present than there is enzyme

B

There is probably more product present than either substrate or enzyme

C

The enzyme substrate complex is probably failing to form during the reaction

D

There is probably more enzyme available than there is substrate

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Q71 The union of meiotically produced specialized sex cells from each parents produce?

A fertilized egg

B unfertilized egg

C zygote

D none of these

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Q72

Which of the statements correctly describes why ions are unable to cross the plasma membrane without channel proteins?

A

They are unable to cross the hydrophilic phosphate heads of the lipid bilayer.

B

They are unable to cross the hydrophobic tails of the lipid bilayer.

C

They are unable to cross both the phosphate heads and fatty acid chains of the lipid bilayer.

D

They are too big to cross the plasma membrane.

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Q73

The number of efferent lymph vessels in a lymphatic system is:

A

1

B

2

C

3

D

Numerous

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Q74

The brain is mainly divided into --- parts.

A

2

B

3

C

4

D

5

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Q75

What was the unit membrane model?

A

Plasma membrane has lipid bilayer.

B

Proteins are embedded in the lipid bilayer.

C

Plasma membrane has charged pores for transport of materials which cannot penetrate through the lipid bilayer.

D

All of the above.

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Q76 Chromatin body in prokaryotes can also termed as

A nuclear body

B nuclear region

C nucleoid

D all of Above

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Q77 The spinal cord is the continuation of which of the following?

A cerebellum

B pons

C medulla oblongata

D brain stem

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Q78

Calvin cycle is

A

inhibited by light

B

dependent upon light

C

independent on light

D

supported by light

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Q79

What is the approximate diameter of retroviruses?

A

150 nm

B

100 nm

C

200 nm

D

250 nm

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Q80

Which of the following are assembled and disassembled during the cell cycle?

A

microtubules

B

microfilaments

C

all of these

D

none of these

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Q81

Which of the following would not be found in a prokaryotic cell?

A

mitochondria

B

RNA

C

Ribosomes

D

plasma membrane

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Q82

Hemoglobin molecule exhibits which structural organization of proteins?

A

primary structure

B

secondary structure

C

tertiary structure

D

quaternary structure

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Q83

The example of coordinators in chemical coordination is?

A

endocrine glands

B

spinal cord

C

brain

D

human eyes

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Q84

A substance which binds at the active site of the enzyme but does not result in the formation of the products is called?

A

Irreversible inhibitor

B

Reversible inhibitor

C

Non-competitive inhibitor

D

Competitive inhibitor

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Q85

The homologous organs show similarity in

A

shape

B

origin

C

function

D

size

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Q86

A placenta is established between the uterine and ---

A

foetal tissues

B

Bone tissues

C

Lymph tissues

D

Cardiac muscle tissue

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Q87

Which structure of protein gives information about the folding of a protein?

A

primary structure

B

secondary structure

C

tertiary structure

D

quaternary structure

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Q88

Germ cells in the ovary produce many?

A

spermatogonia

B

oogonia

C

zygospores

D

eggs

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Q89

The cell organelles involved, in some cases, with extra-cellular digestion _____ .

A

Golgi complex

B

Lysosomes

C

Peroxisomes

D

Glyoxysomes

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Q90

The cluster of pouches opened from alveolar ducts is known as

A

bronchi

B

bronchioles

C

pharynx duct

D

alveoli

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Q91

Genes that affect growth rate in humans influencing both weight and height are?

A

Codominant

B

Epistasis

C

Polygene

D

Pleiotropy

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Q92

What is the pH of fresh HCl?

A

1.5

B

5-7

C

2-3

D

4-5

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Q93

The difference in photosynthesis spectrum and actin spectrum occurs due to?

A

Carbon dioxide

B

oxygen

C

carotenoids

D

wavelength

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Q94

In humans gill pouches have evolved into which of the following organs?

A

nose

B

ear

C

pharynx

D

eustachian tubes

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Q95

The movement of minerals or water via extracellular pathway is known as:

A

Symplast

B

Apoplast

C

vascular

D

None of these

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Q96 Which of these is common is both lymph vessels and veins?

A Both have small bore

B both have valves

C both have low blood pressure

D both are communicated

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Q97

According to the law of independent assortment, what is the possible number of combinations that chromosomes can assort to independently in the gamete?

A

16,777,216

B

2,048

C

4,194,304

D

8,388,608

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Q98

The only promoter of leaf senescence in the following plant hormones is?

A

gibberellins

B

cytokinins

C

auxins

D

abscisic acid

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Q99

Which of the following is most responsible for bacterial cell motility?

A

cillia

B

flagella

C

pili

D

Pseudopodia

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Q100

What types of viruses contain the enzyme lysozyme to aid in their infection?

A

bacteriophage

B

animal viruses

C

plant viruses

D

fungal viruses

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Q101 What is reduced in photosynthesis?

A oxygen

B carbon dioxide

C water

D light

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Q102 Which of the following is NOT a characteristic feature of tapeworm?

- A Each body segment has two sets of male and female reproductive organs.
- B The digestive tract develops from endodermal cells in the embryo.
- C The body can be cut into two parts, which are mirror images of each other, in one plane only.
- D None of the above.

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Q103

Bacteriophages have been used widely in genetic research, since they are the smallest and simplest biological entities capable of?

A

self replication in host cell

B

duplication

C

self duplication

D

multiplication in host cell

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Q104

Which of the following terms is best defined as a mature, motile, and haploid sperm cell produced during spermatogenesis?

A

Spermatid

B

Spermatogonium

C

Secondary spermatocyte

D

Spermatozoa

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Q105

The epididymis, vas deferens, and urethra are a series of ducts found in which body system?

A

Endocrine

B

Lymphatic

C

Digestive

D

Male reproductive

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Q106

Which of the following would most greatly increase the activity of an enzyme functioning in the small intestine?

A

Decrease the temperature

B

Increase the amount of enzymes

C

Decrease the pH

D

Increase the amount of substrate

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Q107

Central nervous system is present in:

A

Asymmetrical animals

B

Bilaterally symmetrical animals

C

Radially symmetrical animals

D

B and C both are correct

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Q108

Periplaneta belongs to which phylum?

A

Mollusca

B

Annelida

C

Echinodermata

D

Arthropoda

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Q109

From one pyruvate passing through Krebs cycle, how many NADH are formed?

A

1

B

2

C

3

D

4

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Q110

What is the medical terminology for the pain in joints?

A

Chondritis

B

Arthralgia

C

synovitis

D

Rheumatism

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Q111

What is the property of the part of a cell membrane which is in contact with external and internal environment?

A

hydrophobic

B

hydrophilic

C

neutral

D

both a and b

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Q112

Half life of radioactive element means

A

full life decay

B

quarter life decay

C

half of decay

D

all of these

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Q113 The root mean square value of the alternating current is equal to

- A twice the peak value
- B half the peak value
- C equal to the peak value
- D $(1/\sqrt{2})$ times the peak value

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Q114 The fractional change in resistance per kelvin is known as

A coefficient in resistance

B temperature coefficient of resistance

C resistance

D None of these

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Q115

For an object moving in a circle, the angle between linear velocity and the position vector is:

A

0 degrees

B

30 degrees

C

90 degrees

D

60 degrees

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Q116

Effect of work is equal to

A

Change in total energy

B

change in kinetic energy

C

change in power

D

none of these

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Q117

Which rays has highest mass

A

alpha rays

B

beta rays

C

gamma rays

D

none of these

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Q118

Consider a capacitor has vacuum in the space between the conductors. If we double the amount of charge on each conductor, what happens to the capacitance?

A

it increases

B

it decreases

C

it remains same

D

it depends on the size or shape of the conductors

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Q119

The momentum of white light is ____ than x rays

A

less

B

high

C

equal

D

none of these

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Q120

When a charge particle enters in the magnetic field perpendicular to the velocity of charge, followed path is

A

circular

B

parabolic

C

elliptical

D

hyperbolic

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Q121

If a transverse wave travelling in a rarer medium is incident on a denser medium, it is reflected such that...

A

it undergoes a phase change of 90 deg

B

it undergoes a phase change of 180 deg

C

it undergoes a phase change of 270 deg

D

it undergoes a phase change of 0 deg

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Q122

If 1 ampere current will flow in 5m conductor for 1 hour the charge flow will be

A

5C

B

18000C

C

1C

D

3600C

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Q123

If the velocity varies linearly with time then acceleration is called

A

nonuniform

B

discrete

C

instantaneous

D

uniform

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Q124

The frequency of a particle performing circular motion changes from 60 rpm to 180 rpm in 20s, then the angular acceleration is

A

 $0.1\pi \text{ rad/s}^2$

B

 $0.2\pi \text{ rad/s}^2$

C

 $0.3\pi \text{ rad/s}^2$

D

 $0.4\pi \text{ rad/s}^2$

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Q125

The output voltage of a rectifier is

A

smooth

B

pulsating

C

perfectly direct

D

alternating

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Q126

Maximum power is delivered when internal resistance of the source equals

A

zero resistance

B

load resistance

C

max resistance

D

None of these

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Q127

The radiation reached on earth by sun is

A

alpha

B

beta

C

gamma

D

all of these

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Q128

Which one of the following is not the unit of heat?

A

Calorie

B

Joule

C

Watt.sec

D

Watt

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Q129

A travelling transverse wave has amplitude a and wavelength λ . What is the minimum distance between a crest and a trough in the direction of propagation of wave.

A

 $2a$

B

 $a/2$

C

 2λ

D

 $\lambda/2$

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Q130

If two photons interact in same direction what will change

A

mass

B

energy

C

intensity

D

none of these

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Q131

Coulomb's law is only applicable for

A

big charges

B

small charges

C

point charges

D

any charges

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Q132

A car travels 30 m toward east, then it takes turn and travels 40 m towards north. It takes 50 seconds. Its average velocity is:....

A

 $7/5 \text{ m/s}$

B

 1 m/s

C

 $1/5 \text{ m/s}$

D

 5 m/s

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Q133

A bullet of mass 5×10^{-5} has the velocity of 200 m/s, kinetic energy of the bullet is

A

100 J

B

1000 J

C

10 J

D

none of these

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Q134

The electric field inside a spherical shell of uniform surface charge density is

A

Zero

B

Infinite

C

Constant less than zero

D

Directly proportional to distance

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Q135

A particle of mass ' m ' is projected from the ground with an initial speed u_0 at an angle ' a ' with the horizontal. At the highest point of its trajectory it makes a completely inelastic collision with another particle of mass which was thrown vertically upward from the ground with the same initial speed u_0 . The angle that the composite system makes with the horizontal immediately after the collision is

A

 37°

B

 $45^\circ - a$

C

 $45^\circ + a$

D

 90°

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Q136

Average life in terms of decay constant is

A

$1/\lambda$

B

λ^2

C

2λ

D

$\ln 2/\lambda$

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Q137

Transistors can be used as

A

half wave rectifier

B

full wave rectifier

C

both

D

none of these

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Q138

Woolen clothes keep the body warm because of

A

bad conductivity

B

good conductivity

C

low temperature

D

none of these

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Q139

The black body which is close to perfect body is :

A

Translucent glass box

B

Cavity Radiator

C

Black holes

D

All of these

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Q140

A monatomic gas is supplied the heat Q very slowly keeping pressure constant. The work done by the gas is

A

 $\frac{2}{3}Q$

B

 $\frac{1}{3}Q$

C

 $\frac{Q}{2}$

D

 $\frac{2Q}{5}$

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Q141

In simple harmonic motion, which two quantities are always in opposite direction?

A

kinetic energy and potential energy

B

kinetic energy and velocity

C

velocity and acceleration

D

acceleration and displacement

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Q142

In a stationary waves, if the string is made to vibrate in n loops, the frequency of stationary waves set up on the string will be:

A

$$f_n = n \cdot f_1$$

B

$$f_n = n + f_1$$

C

$$f_n = f_1 / n$$

D

$$n \cdot f_n = f_1$$

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Q143

Two identical gases expand i) isothermally ii) adiabatically. Work done is more in

A

Isothermal process

B

Adiabatic process

C

Neither of them

D

equal in both cases

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Q144

The existence of positron was discovered in the

A

thermal radiation

B

cosmic radiation

C

electromagnetic radiation

D

non-electromagnetic radiation

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Q145

T_1 and T_2 are the half lives of two radioactive elements of decay constant λ_1 and λ_2 respectively then the value of T_1/T_2 is.....

A

$\lambda_2 = \lambda_1$

B

$\lambda_1 \lambda_2$

C

λ_1 / λ_2

D

λ_2 / λ_1

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Q146

The sum of absorption and transmission of light in a medium is equal to

A

incident light

B

reflected light

C

any of a or b

D

none of these

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Q147

 $1/R_{eq} = 1/R_1 + 1/R_2 + 1/R_3 + \dots + 1/R_n$ is the combination in

A

Series

B

Parallel

C

Both of them

D

None of them

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Q148

The direction of linear velocity of a body moving in a circle is?

A

Along radius away from center

B

Along radius towards center

C

changing with motion

D

Along the tangent

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Q149

Find the electric field when the velocity of the field is 12m/s and the flux density is 8.75 units.

A

510

B

105

C

150

D

165

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Q150

4000 Coulomb charges were passing from the wire for about 12 seconds. Estimate the current during this process?

A

333.3 ampere

B

333.33 volts

C

666.67 ampere

D

None of them

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Q151

When momentum of body increased by 200 %, its kinetic energy increases by

A

200 %

B

300 %

C

400 %

D

800 %

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Q152

For a half-wave rectifier having diode voltage V_D and supply input of V , the diode conducts for $\pi - 2\theta$, where θ is given by

A

$$\tan^{-1}(V_D/V)$$

B

$$\sin^{-1}(V_D/V)$$

C

$$\cos^{-1}(V_D/V)$$

D

$$\cot^{-1}(V_D/V)$$

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Q153

In annihilation process particles move in

A

same direction

B

opposite direction

C

perpendicular direction

D

none of these

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Q154

Steady current does not change with respect to _____.

A

conductor

B

source

C

time

D

potential difference

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Q155

If an A.C voltage rms value of 10 volt is applied as input of half wave rectifier, then the rms voltage value of D.C output will be

A

10V

B

10.3V

C

10.7V

D

9.3V

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Q156

Is it possible to visualize magnetic flux lines

A

yes directly we can see with eyes

B

we need microscope

C

we need telescope

D

All cases are not possible

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Q157

X rays are also known as

A

slow moving invisible photons

B

slow moving visible photons

C

fast moving invisible photons

D

fast moving visible photons

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Q158

100 W heater is used to heat 500 g of water from 20°C to 50°C. How long should the heater be switched on? Specific heat capacity of water is 4.2 J/g°C.

A 63 sec

B 63 min

C 630 sec

D 6.3 min

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Q159

A pendulum undergoes simple harmonic motion. The phase difference between the displacement and the acceleration of the particle is:

A

0

B

 $\pi/2$

C

 π

D

 $3\pi/2$

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Q160

The isotope of $^{235}_{92}\text{U}$ has _____ number of neutrons

A

141

B

142

C

143

D

144

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Q161

Choose the correct sentence.

A

i think june is the hottest month.

B

I think june is the hottest month.

C

I think June is the hottest month.

D

I think June is the hottest month.

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Q162

Choose the correct spelling of the word

A

arround

B

arond

C

arund

D

around

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Q163

He _____ a mill in this town.

A

have

B

has

C

is having

D

was having

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Q164

What is the tense of this question? What will you do when this course finishes?

A

Present

B

past

C

future

D

none of these

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Q165

Which verb is NOT in the present tense?

A

She listened

B

She talks

C

She waits

D

She eats

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Q166

Sameer _____ in the park every day.

A

run

B

runs

C

running

D

walk

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Q167

Mrs Rose planning to do a course in Biology next week.

A

are planning

B

plans

C

with a plan

D

planning

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Q168

Choose the correct sentence.

A

Wow, what a wonderful event.

B

Wow! What a wonderful event?

C

Wow! What a wonderful event!

D

Wow! what a wonderful event.

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Q169

Choose the correct sentence.

A

Ariel is trying hard in school this semester, her father said.

B

Ariel is trying hard in school this semester,' her father said.

C

Ariel is trying hard in school this semester?' her father said.

D

Ariel is trying hard in School this semester,' her father said.

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Q170

Sana became _____ at typing because she practiced every day for six months.

A

reflective

B

redundant

C

proficient

D

dormant

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Q171 Most people agree that kindergarten contributes _____ the child's mental development.

A on

B to

C among

D of

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Q172

To an outsider, the economics of this country _____ to be in disarray.

A

seem

B

seems

C

seemed

D

seeming

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Q173

We _____ a week in Italy each year.

A

spend

B

spending

C

spends

D

are spending

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Q174

The umpire and the two teams walked out onto the _____.

A

circus

B

course

C

observatory

D

pitch

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Q175

The book is about _____ man who lives on _____ small island.

A

a... an

B

a... a

C

a... the

D

an... an

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Q176

You can get (A)/ all the information (B) you want (C) from this book. (D)

A

You can get

B

all the information

C

you want

D

from this book.

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Q177

Everything ____ fine when it's done correctly.

A

work

B

worked

C

will work

D

works

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Q178

Statement A very large number of students have failed in the final high school examination due to faulty questions in one of the subjects. I. All the students who have failed in the subject should be allowed to take supplementary examination. II. All those who are responsible for the error should be suspended and an enquiry should be initiated to find out the facts.

A

Both of them follow

B

Only I follow

C

Only II follow

D

None of them follow

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Q179

Which letter lies in the middle of word Quality?

A

L

B

A

C

U

D

Y

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Q180

Statements : All fish are tortoise. No tortoise is a crocodile. Conclusions : I. No crocodile is a fish. II. No fish is a crocodile.

A Only conclusion II follows

B Either I or II follows

C Neither I nor II follows

D Both I and II follow

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Q181

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A

Both of them follows

B

None of them follows

C

Only I follows

D

Only II follows

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Q182

Fact 1: Some pens don't write Fact 2: Only blue pens write Fact 3: some writing utensils are pens If the above three statements are facts than which of the following statement will also be a fact I. Some writing utensils don't write II. Some writing utensils are blue III. Some blue writing utensils don't write

A

Only III

B

Only I and II

C

Only I

D

Only III and II

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Q183

Complete the series A2.5, B5, C7.5, _____?

A

D9

B

D10

C

D9.5

D

D45

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Q184

Look at this series 5.2, 4.8, 4.4, 4. What number should come next

A

3

B

3.3

C

3.5

D

3.6

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Q185

I. There has been a decline in the prices of the personal computers. II. School going kids are expressing interests in learning how the computer operates.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect.

C

Both statements I and II are independent causes

D

Both statements I and II are the effects of independent cause.

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Q186

Language with the most alphabets is _____

A

French

B

Chinese

C

Portuguese

D

Urdu

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Q187

What percentage of protein is found in the cell membrane?

A

20-4-

B

40-50

C

60-80

D

90

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Q188

Wholar first time prepare urea in laboratory in_____?

A

1900

B

1829

C

1850

D

1828

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Q189

Should I wear my joggers or my _____?

A

cardigan

B

shorts

C

scarves

D

trainers

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Q190

The specific site at which substrate is attached on the enzyme and converted into product is called as ___?

A

Reaction site

B

Active site

C

Binding site

D

None of these

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Q191

overcast

A

rainy

B

cloudy

C

windy

D

clear

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Q192

Following is termed as hydroxyl derivative of alkanes

A

carboxylic

B

Aldehydes

C

Phenols and ethers

D

Alcohols

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Q193

Reaction intermediate

A

Cannot be Separated from reaction mixture

B

Contain normal bonds

C

can be isolated from reaction mixture

D

Both B and C

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Q194

What is the common name of 2-methyl-2-chloropropane ?

A

secondary propyl chloride

B

Tertiary butyl chloride

C

Secondary butyl chloride

D

Isobutyl Chloride

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Q195

Non protein part which is conjugated with protein is called_____.

A

Coenzyme

B

Co-factor

C

Prosthetic group

D

None

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Q196

In a travelling wave, five complete waves passes through a point in 10 seconds. Frequency of the wave is:.....

A

0.5 Hz

B

5 Hz

C

50 Hz

D

15 Hz

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Q197

How does pyruvate enter the krebs cycle after glycolysis?

A

pyruvic acid

B

acetyl coA

C

carbon dioxide

D

both a and b

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Q198

Maximum efficiency of half wave rectifier is

A

80.6 %

B

40.60%

C

70%

D

50%

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Q199 If we decrease temperature of a gas 2 times, its volume will

A increase 4 times

B decrease 4 times

C decrease 2 times

D increase 2 times

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Q200

The contractile protein of skeletal muscle involving ATPase activity is:

A

actin

B

myosin

C

troponin

D

tropomyosin

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Q201

The direction of induced current is always so as to oppose the change which causes the current is

A

Faraday's Law

B

Lenz's Law

C

Ohm's Law

D

Kirchoff's Law

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Q202 Natural selection can amplify or diminish variations that are?

A Heritable

B non heritable

C both a and b

D acquired

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Q203

The four bulbs of 40 W each are connected in series with a battery across them. Which of the following statement is true?

A

The current through each bulb is same

B

The voltage across each bulb is not same

C

The power dissipation in each bulb is not same

D

None of the above

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Q204

The magnetic field is parallel to a surface, then the magnetic flux through the surface is :

A

zero

B

small but not zero

C

infinite

D

larger than 1

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Q205

All viruses are generally resistant to which of the following antibiotics?

A

Penicillin

B

Streptomycin

C

both a and b

D

none

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Q206

Primordial soup is a set of hypothetical conditions on ancient earth first proposed by?

A

Dmitri Ivanovsky

B

Dmitry Anuchin

C

Nikolay Shatsky

D

Alexander Oparin

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Q207

In a stationary wave, the distance between adjacent antinodes is equal to:

A

 λ

B

 2λ

C

 $\lambda/2$

D

 $\lambda/4$

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Q208

Pseudo forces arises in

A

inertial frames

B

constant moving frames

C

rest frame of reference

D

accelerating frame of reference

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Q209

Choose the correct tense?

A

I went to school yesterday.

B

I go to school yesterday

C

I have gone to school yesterday

D

I come to school yesterday.

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Q210 A thermometer is to temperature as a compass is to

A Pressure

B Humidity

C Direction

D Needle

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